

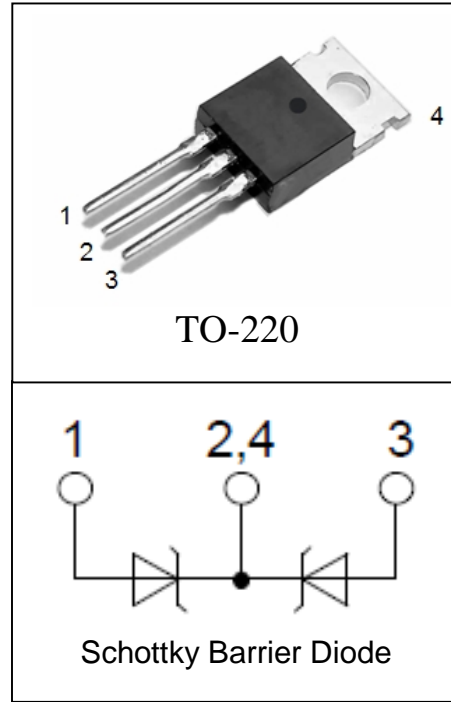
Features

- $V_{RRM} = 100V$
 $I_{F(AV)} = 2 \times 10A$
- Low Power Loss and High Efficiency
- High Surge Capability
- Low Leakage Current
- Low Forward Voltage Drop
- Lead Free and Green Devices Available

Applications

- Rectifiers in SMPS
- Free Wheeling Diode
- DC-DC Converters

Pin Description



Absolute Maximum Ratings

Symbol	Parameter	Rating	Unit
Common Ratings ($T_C = 25^\circ C$ Unless Otherwise Noted)			
V_{RRM}	Maximum Repetitive Reverse Voltage	100	V
V_R	Maximum DC Reverse Voltage	100	
$I_{F(AV)}$	Average Rectified Forward Current, per Device	20	A
	$T_C = 130^\circ C$ per Diode	10	A
I_{FSM}	Peak Forward Surge Current, 8.3ms Half Sine Wave	150	A
T_{STG}	Storage Temperature Range	-55 to 150	$^\circ C$
T_J	Operating Junction Temperature	150	$^\circ C$
Mounted on Large Heat Sink			
$R_{\theta JC}$	Thermal Resistance-Junction to Case per Diode	1.5	$^\circ C/W$

Electrical Characteristics ($T_C=25^{\circ}\text{C}$ Unless Otherwise Noted)

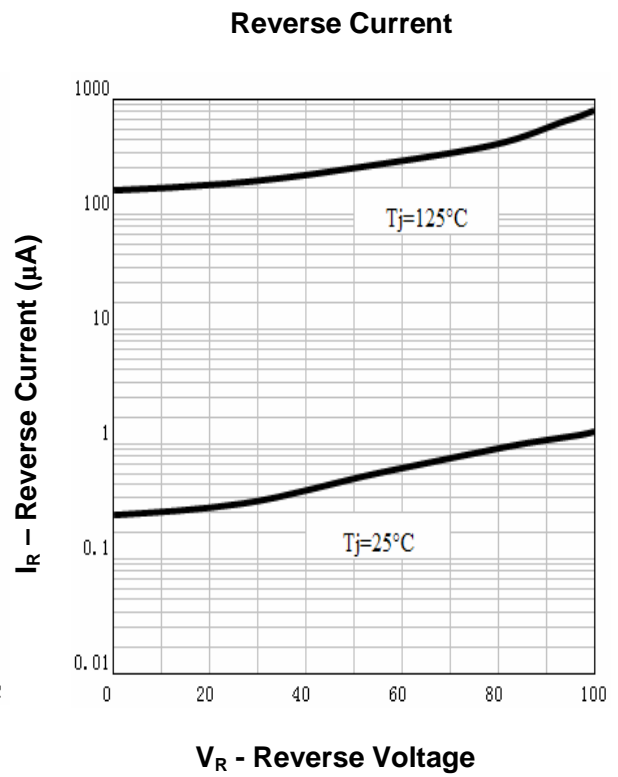
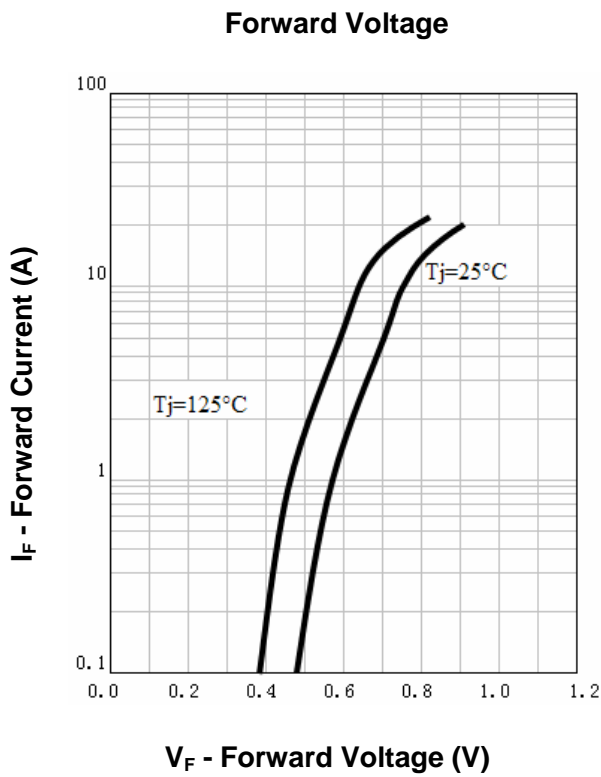
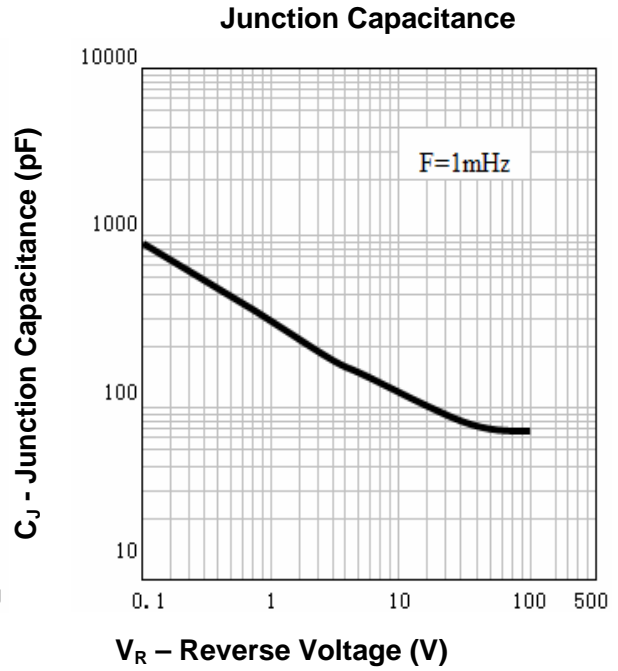
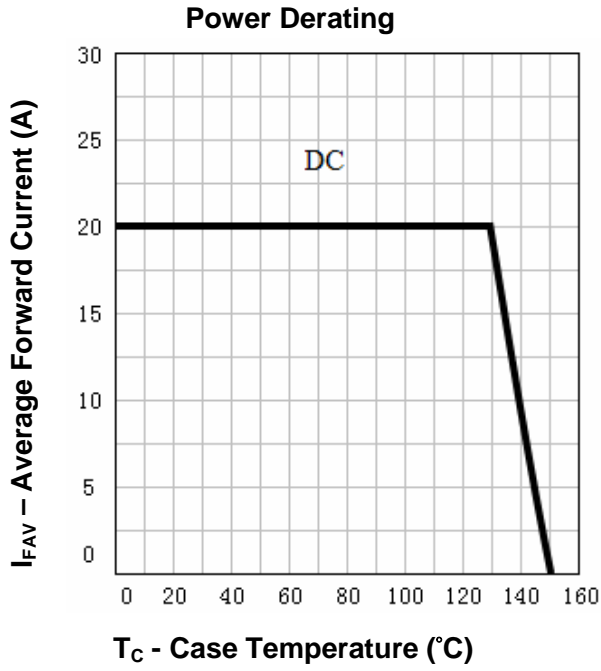
Symbol	Parameter	Test Condition	RUS1H20R			Unit
			Min.	Typ.	Max.	
Static Characteristics						
I_R ^①	Reverse Leakage Current	$V_R=100\text{V}, T_C=25^{\circ}\text{C}$			100	μA
		$V_R=100\text{V}, T_C=125^{\circ}\text{C}$			5	mA
V_F ^①	Zero Gate Voltage Drain Current	$I_F=5\text{A}, T_C=25^{\circ}\text{C}$		0.65	-	V
		$I_F=5\text{A}, T_C=125^{\circ}\text{C}$		0.60	-	V
		$I_F=10\text{A}, T_C=25^{\circ}\text{C}$		0.75	0.8	V
		$I_F=10\text{A}, T_C=125^{\circ}\text{C}$		0.66	0.7	V

Notes: ① Pulse test ; Pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.

Ordering and Marking Information

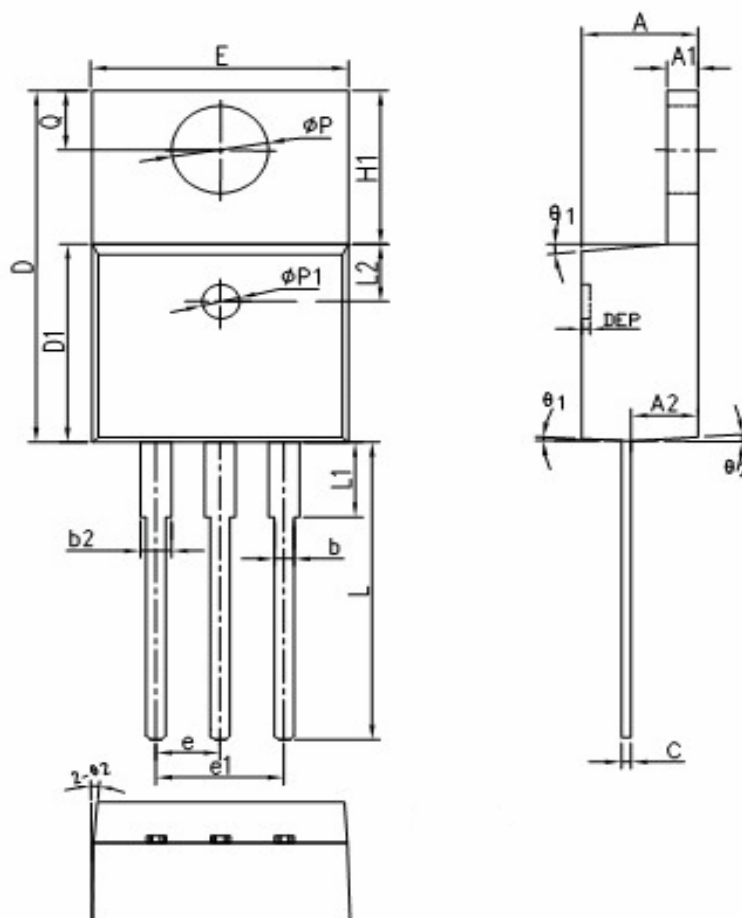
Device	Marking	Package	Packaging	Quantity	Reel Size	Tape width
RUS1H20R	RUS1H20R	TO-220	Tube	50	-	-

Typical Characteristics



Package Information

TO220(AB) Package Outline



SYMBOL	MM			INCH			SYMBOL	MM			INCH		
	MIN	NOM	MAX	MIN	NOM	MAX		MIN	NOM	MAX	MIN	NOM	MAX
A	4.40	4.57	4.70	0.173	0.180	0.185	H1	6.10	6.30	6.50	0.240	0.248	0.256
A1	1.22	1.27	1.32	0.048	0.050	0.052	L	13.20	13.40	13.50	0.520	0.528	0.531
A2	2.59	2.69	2.79	0.102	0.106	0.110	L1	-	-	4.35	-	-	0.171
b	0.77	0.81	0.90	0.030	0.032	0.035	L2	2.50REF			0.098REF		
b2	1.23	1.27	1.36	0.048	0.050	0.054	Øp	3.76	3.84	3.88	0.148	0.151	0.153
c	0.34	0.38	0.47	0.013	0.015	0.019	Q	2.60	2.74	2.90	0.102	0.108	0.114
D	14.70	15.00	15.30	0.579	0.591	0.602	1	5°	7°	9°	5°	7°	9°
D1	8.60	8.70	8.80	0.339	0.343	0.346	2	1°	3°	5°	1°	3°	5°
E	10.06	10.16	10.26	0.396	0.400	0.404	DEP	0.05	0.10	0.20	0.002	0.004	0.008
e	2.54BSC			0.1BSC			Øp1	1.40	1.50	1.60	0.055	0.059	0.063
e1	5.08BSC			0.2BSC									

Customer Service

Worldwide Sales and Service:

Sales@ruichips.com

Technical Support:

Technical@ruichips.com

Investor Relations Contacts:

Investor@ruichips.com

Marcom Contact:

Marcom@ruichips.com

Editorial Contact:

Editorial@ruichips.com

HR Contact:

HR@ruichips.com

Legal Contact:

Legal@ruichips.com

Shen Zhen RUICHIPS Semiconductor CO., LTD

Room 501, the 5floor An Tong Industrial Building,
NO.207 Mei Hua Road Fu Tian Area Shen Zhen City, CHINA

TEL: (86-755) 8311-5334

FAX: (86-755) 8311-4278

E-mail: Sales-SZ@ruichips.com